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NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C. 20594

SAFETY STUDY

**RECREATIONAL BOATING SAFETY
AND ALCOHOL**

NTSB/SS-83/02

UNITED STATES GOVERNMENT

000001

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<p>16. Abstract The National Transportation Safety Board has identified and examined safety improvements to reduce accidents, fatalities, and injuries in recreational boating due to alcohol use and has concluded that the United States Coast Guard should establish a national program through the States to implement needed safety measures. The Safety Board concludes that perhaps as many as 400 to 800 recreational boating fatalities annually may involve alcohol and that as many as 35 to 38 percent may involve persons "legally drunk" at the generally accepted blood alcohol concentration (BAC) of 0.10 percent. Moreover, the Safety Board believes the full extent of alcohol involvement in recreational boating fatalities is probably not fully known.</p> <p>The Safety Board issued priority recommendations to the Coast Guard to develop and implement a national program to address the hazards of alcohol use, to improve the reporting of alcohol involved accidents, and to incorporate information on the hazards of alcohol use in safe boating courses. The Board recommended that the National Association of State Boating Law Administrators develop model education and enforcement programs and coordinate with the Coast Guard in improving the reporting of alcohol involved accidents. Additionally, the Board recommended that nationally recognized recreational boating educational organizations incorporate information on the hazards of alcohol use in recreational boating. Finally, recommendations were issued to 39 States and the District of Columbia (D.C.) to adopt legislation to define the level of intoxication and to 40 States and D.C. to allow chemical testing of recreational boat operators suspected of being intoxicated.</p>			
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FOREWORD

The National Transportation Safety Board has the statutory responsibility to promote transportation safety by conducting independent accident investigations and by formulating safety recommendations. Many of its safety recommendations are a result of the Safety Board's safety studies of important transportation related safety issues. The Safety Board has long been concerned that solutions to certain safety problems of national significance have not been implemented. Therefore, the Safety Board has begun to identify such safety problems each year and aggressively pursue implementation of specific safety improvements. This safety study outlines the Safety Board's effort to identify the problem of alcohol use in recreational boating, to describe progress made in this area by the States, the Coast Guard, and other organizations, and to outline further improvements needed to reduce this problem.

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594**

SAFETY STUDY

Adopted: October 17, 1983

RECREATIONAL BOATING SAFETY AND ALCOHOL

INTRODUCTION

Each day, tens of thousands of recreational boaters ply the Nation's many lakes, rivers, bays, and waterways. A 1981 United States Coast Guard (Coast Guard) report estimates that 50 million people participate in various recreational boating activities on the average of 8 days a year. According to this report, participation in recreational boating activities has increased 47 percent since 1960 and is continuing to grow. 1/ There are an estimated 15 million recreational boats in the United States.

Most recreational boating ventures on the waters will be safe; however, a significant number will involve fatalities arising in highly varied ways. (Appendix A contains a tabulation of 1982 data and descriptions of several recreational boating accidents involving multiple fatalities and injuries.) Since the early 1970's, the Coast Guard has suspected that the use of alcohol has been a significant factor in recreational boating fatalities. However, in current data its role appears to be greatly understated, and therefore the problem has not received the attention that should be given to what may be the number one cause of recreational boating accidents and fatalities.

This study will explore what is known about the extent of alcohol involvement in recreational boating accidents today. For the purposes of this study, recreational boating accidents were considered to be alcohol involved if alcohol was cited as a cause or factor in the accident or if toxicological tests for alcohol were positive, even at a low level. The term "alcohol-related" frequently used in the literature may or may not be exactly equivalent, depending on the researcher.

For the years 1978 through 1982, the Coast Guard reported that only 397, or approximately 6 percent, of the 6,467 recreational boating fatalities involved alcohol as a primary or secondary cause. (Appendix B contains Boating Accident Statistics for the years 1978 through 1982.) Studies and surveys conducted by a small number of States indicate that the problem is much more severe -- possibly 10 times more severe.

In comparison to other modes of transportation, recreational boating fatalities are second only to fatalities in the highway mode and slightly higher than fatalities reported for general aviation.

Highway fatalities -- 43,990
Recreational boating fatalities -- 1,178
General aviation fatalities -- 1,164 2/

1/ Department of Transportation, U.S. Coast Guard, "Recreational Boating Safety, Research and Development Program, Perspective: 1977-1981," p. 2.

2/ National Transportation Safety Board, "Transportation Fatalities* 48,040 in 1982 (preliminary estimates) press release issued May 15, 1983.

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Magnitude of the Alcohol Problem in Recreational Boating

In 1973, research completed for the Coast Guard indicated that identification of the alcohol problem in recreational boating should be undertaken. The author of the research study stated:

Since the debilitating effects of alcohol cannot and are not disputed it remains a problem of identifying the degree or extent to which significant numbers of small boat operators abuse alcohol while on the water. . . . It is, therefore, recommended that an increased effort be made to acquire in-depth, on-the-scene accident data whenever and wherever possible in order to ascertain the degree of alcohol involvement. Also, a random sampling study of boat operators' BACs [Blood Alcohol Concentrations] could be undertaken to ascertain the extent of alcohol usage/abuse while boating. This and other approaches exemplified in highway safety efforts in this area are strongly recommended. 3/

Another study conducted in 1975 4/ had three objectives: (1) to define the extent of drunkenness in recreational boating activities; (2) to describe a method of determining the degree of drunkenness of boat operators; and (3) to describe the degree of drunkenness of drowning and accident victims in recreational boating.

Some of the major conclusions of this study follow:

- o The researchers had no data to assess the magnitude of the alcohol problem in boating.
- o Although it was acknowledged that it was difficult to obtain data, the researchers compared available statistics in 1974 and concluded that the alcohol problem in fatal boating accidents appeared to be more than twice as great as the problem in automobiles.
- o Nearly 50 percent of the victims who drowned in recreational boating accidents had something to drink or had some barbiturates.
- o The studies reviewed by the researchers showed that peripheral vision, balance, and information processing was affected almost as soon as one started drinking. By the time an operator's blood alcohol concentration reached 0.035 percent, the impairments in relatively normal boating operations were significant.

In a 1976 nationwide boating survey, the Coast Guard included a question on "Beverages Carried on a Normal Boating Outing." Based on statistical sampling of an estimated 14,895,000 recreational boating households, 33.7 percent or 5,023,000 indicated that they carried beer and 6.4 percent or 950,000 indicated that they carried other alcoholic beverages.

3/ Dr. James M. Miller, "Human Factor Applications in Boating Safety," Volume I, prepared for the Coast Guard, Report Number CG-D-90-74, Washington, D.C., September 1973.

4/ Wyle Laboratories, "Alcohol and Pleasure Boat Operators," prepared for the Coast Guard, Report Number CG-D-134-75, Washington, D.C., June 1975.

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Other national sources provide some broad overview statistics on the use of alcohol and fatalities in drownings. ^{5/} For example, the Center for Disease Control in Atlanta, Georgia, reported in 1980 that alcohol use might have been involved in 69 percent of the reported drownings, the third leading cause of accidental death in the United States. The National Council on Alcoholism indicated in a 1981 report that drinking was involved in at least 65 percent of all drownings. In a publication of the National Institute of Alcohol Abuse and Alcoholism, the following is reported:

Alcohol is reported to play a significant contributing role in drownings. Haberman and Baden (1978) found that 68 percent of drowning victims had been drinking, while Hudson (1976) found that 50 percent of them had been drinking. Alcohol is consumed frequently and in quantity during recreational activities such as boating and swimming. In recreational contexts, higher consumption may lead to poor judgment, faulty coordination, and lack of attention. . . . (British Medical Journal 1979.) ^{6/}

These reports are significant since the Coast Guard reports that nearly 90 percent of recreational boating fatalities are the result of drowning.

Although, as noted, alcohol use has long been suspected by the Coast Guard (as well as by State marine boating law authorities) of being a major factor in the high number of recreational boating fatalities, representative and credible national statistics still are not available.

Current regulations (33 CFR Parts 173 and 174) that implement the Federal Boat Safety Act of 1971, as amended, require that the operator of any vessel that is numbered or used for recreational purposes that is involved in an accident, file a report if the accident results in loss of life, personal injury which requires medical treatment beyond first aid, damage to the vessel and other property exceeding \$200, or complete loss of the vessel.

The Act requires boat operators to report accidents ^{7/} to authorities of the State or territory (hereafter State(s) includes territories) in which the accident occurred or directly to the Coast Guard if it occurred in a jurisdiction without an approved boat numbering system (Alaska, New Hampshire, Washington, and the Northern Marianas presently do not have State numbering systems). States furnish the Coast Guard copies of boating accident reports. (Appendix C contains a copy of the Boating Accident Report, form CG-3865.) The Coast Guard sets the minimum reporting requirements, but States are allowed to set stricter reporting and investigation requirements; however, in most cases, form CG-3865 is used as the States' investigative report. The Coast Guard estimates that it receives reports on approximately 95 percent of the fatal recreational boating accidents but only 5 to 10 percent of all reportable accidents ^{8/} not involving a fatality. Several factors affect the national statistics issued by the Coast Guard, including:

^{5/} It should be noted that these statistics do not clearly differentiate drownings in recreational boating accidents and drownings in other water related activities.

^{6/} John R. Deluca, ed., Alcohol and Health, Rockville, Maryland: National Institute on Alcohol Abuse and Alcoholism, Public Health Service, 1981, p. 83.

^{7/} U.S. Coast Guard, Boating Statistics 1982, COMDTINST M16754.1D, issued June 1983, p. 1.

^{8/} Ibid., p. 13.

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- o Only in the approximately 25 percent of the fatal accidents which are investigated by the Coast Guard is there any assurance of verification of injuries, property damage, or definitive primary and secondary causes.
- o Compliance with reporting requirements varies from location to location and is influenced by Coast Guard and State enforcement practices and programs.
- o Not all accidents are reported to the States or to the Coast Guard.
- o Boating accident reports are usually completed by the person involved in the accident or next of kin, who may not provide accurate and objective information about the accident.

Nationally, there are no uniform reporting requirements or guidelines to collect information on the involvement of alcohol in recreational boating accidents, fatalities, and injuries. The Coast Guard, when it investigates a fatality, does attach a "Recreational Boating - Simplified Narrative," form CG-4885, completed by a District Marine Safety Office (appendix D contains an example of form CG-4885) which includes a Coast Guard review of the boating accident report, additional investigatory information, and a determination of the cause(s) of the accident. One cause which the Coast Guard identifies during its investigations or review of boating accident reports is "excessive drinking." Even with this review, the Coast Guard cannot determine the complete picture of alcohol involvement in recreational boating accidents from the boating accident reports since there is no quality assurance control regarding the reports, the reports often lack autopsy reports, and the investigations by the States may not be complete.

As an example, in 1982, the Coast Guard received reports on 5,377 recreational boating accidents which resulted in 1,178 fatalities, 2,682 injuries, and \$15.34 million in property damage. Based on available data, only 95 of these recreational boating accidents involved alcohol as a primary or secondary cause; they resulted in 70 fatalities, 22 injuries, and property damage in excess of \$46,700. This amounts to 1.8 percent of the accidents, 6 percent of the fatalities, and 0.3 percent of the property damage. 9/ However, based on some States' data that have recently become available, the use of alcohol and its effects in accidents, fatalities, and injuries appears to be grossly underreported.

Several States have made efforts to document the role of alcohol in recreational boating accidents. A study 10/ released in 1980 indicated that 38 percent of persons killed in recreational boating accidents in 1979 in North Carolina had blood alcohol concentrations (BACs) of 0.10 percent or greater. North Carolina's "legally drunk" BAC is 0.10 percent for motorists. In 3 years (1980 through 1982), Maryland reported 613 boating accidents, 238 injuries, 75 fatalities, and \$1.895 million in property damage. Of these accidents, 75 percent were alcohol related. 11/ California's Department of Boating and

9/ Source: U.S. Coast Guard Computer Printout of "Fatal Boating Accidents - Alcohol Related - 1982."

10/ North Carolina Wildlife Resources Commission, "North Carolina: Report of Accidents and Fatalities Involving Watercraft, 1979," issued April 18, 1980.

11/ Testimony of Captain Franklin L. Wood, State of Maryland Natural Resources Police before the Maryland House on House Bill 873, March 21, 1983.

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Waterways reported in 1980, based on coroners' reports for the years 1978 through 1980, that 35 percent of recreational boating fatalities where data were available had BACs of 0.10 percent or greater. Currently, at the request of the California legislature, the Department of Boating and Waterways has in progress (to be completed by 1986) a 3-year study on the influence of alcohol and drugs on motorboat accidents, fatalities, and injuries. ^{12/} A report released in July, 1982, by the South Carolina Commission on Alcohol and Drug Abuse entitled "The Alcohol and Health Report for South Carolina" indicates, based on South Carolina coroners' reports for 1979, that 30 of 37 deaths involving watercraft and 63 of 81 drownings were "alcohol-related." The report went on to say that "it is probably not a coincidence that alcohol is involved in a large proportion of accidental deaths occurring on water. Most boating deaths are drownings, which occur when someone falls out of a boat or causes it to tip over, and there are indications that people with high blood alcohol concentrations are especially susceptible to drowning." The Commission stated "that South Carolina's experience, at least for the year 1979, clearly shows an alcohol relationship in about three-fourths of these deaths, and it's obviously something that should be of more concern than it has seemed to be."

Coast Guard Boating Safety Program

The Coast Guard has a Boating Safety Program the objective of which is to minimize the risk of loss of life, personal injury, and property damage resulting from the use of recreational boats. The statutory authority for this program is found in the Federal Boat Safety Act of 1971, as amended, which authorizes national boat construction safety standards; encourages greater uniformity of States' boating laws and regulations; provides for Federal financial assistance to States and public nonprofit organizations; and establishes a National Boating Safety Advisory Council.

The Boating Safety Division of the Office of Boating, Public and Consumer Affairs is the responsible division in Coast Guard headquarters for the boating safety program. In this capacity, the Boating Safety Division has established three major programs, two of which broadly encompass:

EDUCATION:

- o Developing federal minimum education "guides" to address accident scenarios;
- o Reviewing all State and national organizations' boating education programs and course material to ensure computability with the "guides;"
- o Approving State education programs;
- o Supporting the public education programs of the Coast Guard Auxiliary; and
- o Cooperating with volunteer organizations such as the U.S. Power Squadrons, the American National Red Cross, etc.;

12/ Interview with official of the Department of Boating and Waterways, State of California.

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ENFORCEMENT:

- o Developing minimum requirements for safety equipment for recreational boats;
- o Identifying and disseminating guidelines for safe operation of recreational boats;
- o Improving uniformity and comity of State regulations and laws through work with State boating law administrators and marine police and with other Federal agencies; and
- o Training federal, state and local enforcement personnel.

The third program is technical in nature and addresses developing performance-oriented safety standards for construction of boats and associated equipment, identifying and correcting safety related boat defects, and promoting uniformity of standards through work with national and international recreational boating industry organizations.

The financial assistance provided in the Federal Boat Safety Act of 1971 is intended to improve recreational boating safety by encouraging the States to assume the primary responsibility for boating safety education and law enforcement.

Costs that may be covered by these funds include, but are not limited to:

- o Public boating safety education, including educational programs, lectures, and safety related exhibits at boat shows, provided to the general public, various segments of the boating community, and the public school system to the extent the education relates to boating safety.
- o Boat safety inspections and accident investigations.
- o Establishment of local watercraft controls required for the safety of boaters.
- o Personnel salaries and reimbursement of expenses of personnel who work on boating safety programs, including boating education and law enforcement, as part of their duties, to be credited in the same percentage as the time these personnel devote to boating safety. 13/

Recently, the amount of funds appropriated for State marine recreational boating safety programs was more than doubled, from \$5.7 million to \$12.5 million for fiscal year 1983 as the result of an amendment to the Federal Boat Safety Act of 1971. H.R. 2163, which is still pending in Congress, would authorize \$45 million for boating safety programs: \$15 million to be disbursed to the Coast Guard and \$30 million to the States. 14/

13/ U.S. Coast Guard, "National Recreational Boating Safety Program: Federal Financial Assistance State Guide," Washington, D.C., issued July 18, 1983.

14/ National Boating Federation, "Lookout," Washington, D.C., issued July 1983.

The Coast Guard cooperates with the National Safe Boating Council (NSBC), an organization formed in 1958, which presently has a voluntary membership of 29 organizations. These organizations include Federal and State agencies directly involved in recreational boating safety and educational activities; national and regional, non-profit public service organizations involved in the recreational boating field; and national, non-profit boating industry organizations. The purpose of the NSBC is to provide a setting for national or regional, non-profit member organizations interested in boating education and safety to exchange views and coordinate their activity, to advance and foster the safe enjoyment of recreational boating, and to educate the public on the principles of safe boating. NSBC is most visible during its annual sponsorship of National Safe Boating Week traditionally in June of each year. One campaign that has been suggested for the 1984 National Safe Boating Week is the role of alcohol in recreational boating accidents. NSBC will meet in late October of this year to decide on its topic for the 1984 safe boating week.

The National Boating Safety Advisory Council (BSAC) includes 21 members who advise the Coast Guard on recreational boating issues. The membership consists of seven representatives each from the boating industry, State Boating Law Administrators, and the public. BSAC has been prominent in reviewing all Federal regulations applicable to the recreational boating area. Within the last year, BSAC has added a new subcommittee which will address consumer education. BSAC has not yet focused attention on the role of alcohol in recreational accidents and fatalities.

Aside from developing as a possible topic of the role of alcohol in recreational boating accidents for National Safe Boating Week, the Coast Guard's Boating Safety Division has yet to focus on a concerted national effort on the alcohol problem. The Coast Guard has the ability to develop and implement a national education program to address the alcohol issue using its own resources and the U.S. Coast Guard Auxiliary. Moreover, the U.S. Power Squadrons, the National Safe Boating Council, and public schools and colleges could be encouraged to conduct parallel programs. Finally, the present enforcement and education programs of the States could address the alcohol issue using the guidelines of the Coast Guard's national program.

The Commandant has directed by Commandant Notice, COMDTNOTE 16107, that all units in the First (Boston) and Eleventh (Long Beach) Districts are to report the extent to which negligence and alcohol are specific contributing factors in Coast Guard search and rescue (SAR) responses. This information is to be based on observation only -- not tests. The reporting period for this effort is April 26, 1983, to October 3, 1983. The intent of this effort apparently is to meet one of the requirements of the 1982 Coast Guard Roles and Missions Report to improve the Coast Guard's capabilities to analyze the cause of SAR incidents.

State Programs

The State recreational boating programs generally are located in the State Departments of Natural Resources or Public Safety. However, some States, California for example, have a separate Department of Boating and Waterways. Nearly every State has specific recreational boating law enforcement and education programs. The State recreational boating administrators have organized the National Association of State Boating Law Administrators (NASBLA) to pursue coordinated activity on legislative issues before the Congress and on enforcement and safety issues with the Coast Guard. Additionally, they have formed four regional associations in which member States and provinces in Canada participate in discussions of mutual concern.

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The State of California's Department of Boating and Waterways completed a "Vessel Intoxication Law Survey" of the States in 1981 (see table 1). Forty-two States and the District of Columbia responded to the survey. The additional eight States were contacted to complete the survey. The general results indicated that: (1) although it is unlawful in 48 States and D.C. to operate a vessel while under the influence of alcohol, there is no defined level of intoxication in 39 States and the D.C.; (2) a chemical test of blood, breath, or urine cannot be taken in most States without consent if a boat operator is suspected of being intoxicated or involved in an accident; (3) only a few States have a mechanism to suspend or deny recreational boating privileges if alcohol is involved, and the effectiveness of these mechanisms is limited by the general absence of licensing requirements for recreational boat operators.

Recent State Legislation on Alcohol and Recreational Boating

Since the California study of 1981, State interest in the role of alcohol use and recreational boating accidents has increased. The legislatures in a number of States have passed tougher laws to address this concern.

1. California. The California Legislature enacted AB-1463, Ch. 897, late in 1981, after the survey conducted by the Department of Boating and Waterways. This law subjects boat operators who kill or seriously injure another person while under the influence of intoxicating liquor or drugs to felony charges. The law does not establish limits setting forth the level of intoxication nor does the law prohibit the consumption of alcohol on board a recreational boat. Nor does the law provide for the testing of an individual's blood alcohol concentration after an accident.
2. Michigan. The Michigan Legislature has enacted tougher new sanctions against drunken motorboat operators (HB-5011, Public Act 231, Laws 1982). If the marine police have reasonable cause to believe that the operator of a vessel involved in an accident is under the influence of intoxicating liquor or a controlled substance, or both, or is operating a vessel while the ability to do so is visibly impaired, the officer may make an arrest without a warrant. If the arrested person refuses to submit to a chemical test for alcohol content, the test may not be administered without a court order. However, the refusal to take a test is admissible as evidence. The court may also prohibit a convicted person from operating on State waters for up to 2 years and may require that the person participate in an alcohol training program.
3. Arizona. The Arizona Legislature has enacted a new law (SB-1215, Ch. 248, Laws 1983) that reduced the blood alcohol concentration defining intoxication for motorboat operators from 0.15 percent to 0.10 percent and established an implied consent provision requiring submission to a chemical test of blood alcohol concentration if arrested for operating under the influence of alcohol. Failure to submit to a test is admissible as evidence. The 0.10 percent level of intoxication is the same level established for drunken driving arrests.
4. Maryland. The Maryland Legislature enacted legislation (HB-873, Public Laws 1983, effective on July 1, 1983) that prohibits the operation of a vessel while under the influence of alcohol, drugs, or both. The implied consent requirements for the chemical test for intoxication used for motor vehicle drivers were incorporated into the new law.

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Table 1.--Vessel Intoxication Law Survey.

	Is it unlawful to operate a vessel under the influences of			Level of intoxication for vessels		Can a chemical test be taken of blood, breath, or urine if			Do you have an implied consent law	Car. operating privileges be suspended
	Alcohol	Drugs	Combination	Auto	Boat	Suspected of being intoxicated	Involved in accident	Voluntarily consents		
Alabama	Yes	Yes	Yes	.10	No	No	No	Yes	No	No*
Alaska	Yes	Yes	Yes	.10	No	Yes	Yes	Yes	No	No
Arizona	Yes	Yes	Yes	.10	.10	Yes	Yes	Yes	Yes	No
Arkansas	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
California	Yes	Yes	No	.15	No	No	No	Yes	No	No
Colorado	Yes	Yes	Yes	.10	No	Yes	Yes	Yes	No	No
Connecticut	Yes	Yes	No	.10	No	No	No	Yes	No	Yes
Delaware	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
D/Columbia	Yes	Yes	Yes	.10*	No	No	Yes	Yes	No	No
Florida	Yes	Yes	Yes	.10	No	No	Yes	Yes	No	No
Georgia	Yes	Yes	Yes	.10	No	No	Yes	Yes	No	No
Hawaii	Yes	Yes	Mute	.10	No	No	No	Yes	No	Yes
Idaho	No	No	No	.08	No	No	No	Unk.	No	No*
Illinois	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Indiana	Yes	Yes	Yes	.10	No	No	No	Yes	No	No*
Iowa	Yes	Yes	No	.10	No	No	No	Yes	Yes	Yes
Kansas	Yes	Yes	Yes	.10	.10	No	No	Yes	No	No
Kentucky	Yes	Yes	Yes	.10	No	No	No	Yes	Yes	Yes
Louisiana	Yes	Yes	Yes	.10	.10	Yes	Yes	Yes	No	No
Maine	Yes	Yes	Yes	.10	.10	Yes	Yes	No	Yes	No
Maryland*	Yes	Yes	Yes	.08	.08	Yes	Yes	No	Yes	No*
Massachusetts	Yes	Yes	Yes	.10	No	No	No	No	No	Yes
Michigan	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Minnesota	Yes	Yes	Yes	.10	.10	No	No	Yes	No	No
Mississippi	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Missouri	Yes	Yes	Yes	.10	No	No	No	Yes	No	Yes
Montana	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Nebraska	Yes	No	No	.10	.10	Yes	Yes	Yes	No	No
Nevada	Yes	Yes	Yes	.10	No	No	No	Yes	No	No*
New Hampshire	Yes	Yes	No	.10	.10	No	No	Yes	No	No*
New Jersey	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
New Mexico	Yes	Yes	Yes	.10	No	No	No	Yes	Yes	No
New York	Yes	No	Unknown	.10	No	No	No	No	No	No
N.C. Carolina	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
N.D. Dakota	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Ohio	Yes	Yes	Not specific	.10	.10	No	No	Yes	No	No
Oklahoma	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Oregon	Yes	Yes	Yes	.10	No	No	Yes	Yes	No	No*
Pennsylvania	Yes	Yes	Yes	.10	No	No	No	No	No	No
Rhode Island	Yes	Yes	Yes	.10	No	No	No	Yes	No	Yes
So. Carolina	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
So. Dakota	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Tennessee	Yes	Yes	Yes	.10	No	Yes	Yes	Unk.	No	No
Texas	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Utah	Yes	Yes	Yes	.08	.08	Yes	Yes	Yes	No	Yes
Vermont	Yes	Yes	Yes	.10	No	No	No	Yes	No	No
Virginia	Yes	Yes	Yes	.10	No	No	No	No	No	No
Washington	No	No	No	.10	No	No	No	No	No	No
West Virginia	Yes	Yes	Yes	.10	No	No	No	Yes	No	Yes
Wisconsin	Yes	Yes	Yes	.10	No	Yes	Yes	Yes	No	No
Wyoming	Yes	Yes	Yes	.10	.10	No	No	Yes	No	Yes

- * Alabama-Suspension or revocation of boat registration-unenforceable
- * Connecticut-(1) Subject not addressed
- * District of Columbia-For urine test .11 level
- * Idaho-Court can suspend operating privileges on subsequent convictions up to 2 years
- * Iowa-May suspend boat registration
- * Maryland-Infraction 0.08%; misdemeanor 0.15%
- * Massachusetts-Can revoke or cancel Certificate of Number after conviction
- * Nevada-If convicted of involuntary manslaughter, operating denial could be a part of probation
- * New Hampshire-Director can suspend operating privileges-almost impossible to enforce
- * Oregon-Probation can and has been utilized
- * Virginia-Judges discretion on penalty

Compiled by: State of California
Department of Boating and Waterways - 1981
Updated by National Transportation
Safety Board - September 1983

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5. Minnesota. The Minnesota Legislature enacted a law (SBN-121, Ch. 12, Laws 1983 effective July 1, 1983) that imposes criminal sanctions applicable to the operation of vessels where death or personal injury results. The law defines two types of offenses: (1) if an operator of a vehicle, aircraft, or watercraft is guilty of a death because of gross negligence or is negligent under the influence of alcohol or a controlled substance, that person may be sentenced to 5 years in prison and/or a \$5,000 fine or (2) if personal injury but not death occurs to anyone, the penalty may be 3 years in prison and/or a \$3,000 fine.
6. South Dakota. The South Dakota Legislature on March 3, 1983, increased the penalty for operating a vessel while intoxicated or under the influence of drugs and for reckless or negligent operation from a Class 2 misdemeanor to a Class 1 misdemeanor (SBN-71).

Two States presently have legislation pending that addresses the alcohol problem in recreational boating activities.

1. California. California has legislation pending (AB-593) which directs that a comprehensive study be conducted by the State of California's Department of Boating and Waterways on the influence of alcohol and/or drugs on motorboat accidents, fatalities, and injuries. Results of this study are to be reported to the State legislature by January 1, 1986.
2. Louisiana. Louisiana has two bills pending which relate to the recreational boating alcohol problem. Senate Bill Number 39 proposes to establish a new crime known as Vehicular Negligent Injury. This legislation applies to injuries caused by all operators, including watercraft operators, who are intoxicated or under the influence of alcohol and/or controlled dangerous substances. House Bill Number 266 proposes an implied consent condition for operating a watercraft, the same as current law provides in the case of driving an automobile.

The general thrust of the recent States' legislative actions has been (1) to increase the sanctions if negligence is found and the boating operator is under the influence of alcohol; (2) to define a blood alcohol concentration level for intoxication; and (3) to establish provisions for chemical testing if the boat operator is arrested for operating under the influence of alcohol.

During recent regional conferences, ^{15/} the State boating law administrators emphasized the need to closely examine the role of alcohol use in boating accidents, fatalities, and injuries.

NASBLA's Enforcement Committee is actively considering proposals to present for NASBLA consideration at its national conference to be held in October 1983. The president of NASBLA has indicated that the greatest problem from his viewpoint is the need to identify the extent of the problem. He indicates that without implied consent legislation, the statistical information will remain an estimate. He emphasizes that there is no broad-based information available on the frequency of occurrence, accident probabilities, or operator profile as related to alcohol use and recreational boat operation.

^{15/} The conferences were: the Northeastern States Boating Administrators Conference held June 14 to 16, 1983; the Western States Boating Administrators Association Conference held July 12 to 15, 1983; and the North Central International Association of Boating Law Administrators Conference held August 1 to 4, 1983.

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Educational Activities in Marine Recreational Boating

There are a number of national, State, and local educational organizations in the marine recreational boating field. These organizations play an important role in making recreational boating a safe activity.

The U.S. Coast Guard Auxiliary offers several courses nationwide to persons interested in acquainting themselves with the best practices of small-boat handling and seamanship. The courses presented by the Auxiliary are free and cover such topics as outboard motorboat handling, safe boating, principles of safe sailing, and boating safety and seamanship. The Coast Guard Auxiliary courses do not expressly address the dangers of alcohol use in recreational boating.

Through their respective State boating agencies, many of the States have boating safety courses which provide a basic knowledge of safe boating. These courses are reviewed and approved by the Education Committee of NASBLA for course content and accuracy. The courses generally cover such areas as:

- o Boats - Classification, Registration, Trailering Watercraft, Sailboats, and Hull Design
- o Equipment - Motors, A Safe Boat and Lifesaving
- o Safety on the Water - Rules of the Road, Mooring, and Preparation
- o Emergency Measures - Accidents, Fire on Board, and First Aid
- o Skipper's Duties - Maintenance, Courtesy, Security and Storage

Presently, most State boating safety education courses do not contain specific information on the dangers of alcohol use in boating operations. However, the Chairman of the Education Committee of NASBLA indicated that many of the States' safety manuals, when republished, will include information on the hazards of alcohol use in recreational boating.

The U.S. Power Squadrons, a nationwide association of boat operators, offers an extensive program on boating instruction through its local squadrons throughout the country which present a basic course of 10 lessons known as the "USPS Boating Course." The use of alcohol and the dangers it poses for safe operation of boats is not addressed specifically in the course material.

Local chapters of the American National Red Cross offer both classroom instruction and on-the-water training in various phases of boating, sailing, and water safety. None of these courses specifically address the use of alcohol and the dangers it poses to the safe operation of boats.

In addition to these organizations, there are several other recreational boating organizations which could play a prominent role in providing information on the dangers of alcohol use in safe boating activities. The Boat Owners Association of the United States (BOAT/U.S.) is the largest national organization of individual recreational boat owners. It is not affiliated with or supported by any manufacturer, dealer, or other industry or private group. More than 125,000 recreational boat owners from all 50 States are

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members of BOAT/U.S. The Association conducts research into recreational boating practices and usage with the objective of creating effective accident prevention and safety education programs. To accomplish this activity, BOAT/U.S. has set up a Foundation to develop new safety data, educational materials and techniques, and to publish and distribute this information to the boating community.

The National Boating Federation (NBF) consists of regional, State, and national recreational boating organizations. Its membership includes some yachting and powerboat associations in the United States. One of the reasons for the formation of the NBF was to encourage educational programs. Some of the interests of this organization include operator education (but it opposes operator licensing), higher safety standards for boats and equipment, autonomy for State boating agencies, and uniformity of boating laws and regulations.

The National Marine Manufacturers Association (NMMA), whose membership consists of major boating manufacturers and suppliers, presents the manufacturers' positions on various recreational boating issues to the U.S. Congress and the Department of Transportation (U.S. Coast Guard).

Previous Safety Board Recommendation

The Safety Board previously recommended on February 13, 1969, that:

The Coast Guard and States use the same boating accident report form which would include: information on hours of operation of the boat; recommendations to prevent similar future accidents; statement as to whether weather information was available, sought, received and considered; information on engine or other material failure; and whether intoxication or other physical impairment were involved. (M-69-47) 16/

This recommendation was closed "acceptable action" by the Safety Board in 1975 based on the uniform State vessel casualty system reporting requirements published by the Coast Guard in 33 CFR 173.57, entitled "Casualty or accident report." While the reporting requirements included most of what the Safety Board recommended, these Coast Guard requirements did not specifically address the involvement of intoxication or other physical impairment in recreational boating accidents, fatalities, or injuries.

Department of Transportation Initiatives

The Department of Transportation (DOT) conducted a seven-seminar program on operator performance in transportation accidents. Based on the results of the seminars, the Secretary of Transportation requested by memorandum dated August 11, 1983, that the Coast Guard undertake two initiatives in the area of alcohol and drug abuse. Although these two initiatives were not directed to recreational boating, the initiatives do indicate the serious interest of the DOT in addressing alcohol and drug abuse in the marine environment. The initiatives addressed to the Coast Guard were as follows:

16/ National Transportation Safety Board, "Study of Recreational Boat Accidents, Boating Safety Programs, and Preventive Recommendations" issued February 13, 1969.

- a. Encourage alcohol education programs for transportation operators in commercial service. 17/
- b. Determine and implement appropriate methods for collecting and/or developing data on alcohol involvement in marine accidents.

The Effects of Alcohol on Performance

The loss of performance at levels as low as 0.035 percent blood alcohol concentration (BAC) shown in the Coast Guard study previously mentioned is supported by research completed as early as 1950 by K. Bjerver and L. Goldberg in a study published in the Quarterly Journal Studies on Alcohol entitled "Effects of Alcohol Ingestion on Driving Ability. Results of Practical Road Tests and Laboratory Experiments," which documented that the threshold of impairment in driving ability in expert drivers is at BACs of 0.035 to 0.04 percent. In this study, it was concluded that performance decrements reached significant proportions when the concentrations of alcohol in the blood were around 0.035 percent. Goldberg in yet another study, entitled "Alkohol och Trafikrisker" published in 1970 in Sweden indicated that in an emergency situation, a BAC of 0.02 to 0.04 percent has a critical impact. There were detrimental effects and impairment of performance in a range of tested subjects with BACs of 0.02 to 0.04 percent. These low BACs are again spelled out in a 1977 research study by H. Laurell entitled "Effects of Small Doses of Alcohol on Driver Performance in Emergency Traffic Situations." In this study, the effects of driver performance with BACs below 0.05 percent were studied in two contexts: (1) in a critical car-driving situation involving emergency braking and evasive maneuvers, and (2) in a "surprise" situation that followed the first situation and involved the sudden appearance of a man-shaped obstacle blocking the roadway. The results indicated detrimental effects of alcohol at a total BAC average of 0.042 percent.

Other studies substantiate impairment of performance at very low BACs. For example, H. Honneger stated in an article published in 1970 entitled "Alcohol Disturbance of Visual Acuity for Moving Objects," that the ability to distinguish close, but separated, moving objects seems to be consistently impaired at much lower BACs, sometimes as low as 0.03 percent. C. E. Billings and R. L. Wicks in a report (FAA-AM-72-4) entitled "Effects of Alcohol on Pilot Performance during Instrument Flight" prepared for the Federal Aviation Administration stated that the ability to divide attention between tasks can be impaired at very low BACs (i.e. 0.02 percent). Earlier findings made in 1964 by O. Gruner et. al., German researchers, also concluded that very low BACs impaired the ability to divide attention between tasks. Further studies (H. Franks, et. al., "The Relationship between Alcohol Dosage and Performance Decrement in Humans," Journal of Studies on Alcohol, 1976) indicate that the ability to stand upright without swaying begins to decrease significantly at a BAC as low as 0.04 percent.

The American Medical Association and the National Safety Council's Committee on Tests for Intoxication have developed a table which places a BAC of 0.03 percent in the "euphoria" range. The clinical signs and symptoms of this range include increased selfconfidence, decreased inhibitions, diminution of attention, judgment, and control, and loss of efficiency in finer performance tests. These clinical signs and symptoms were expressly characterized as not compatible with the safe operation of motor vehicles.

17/ This initiative also was addressed to the Federal Aviation Administration, the Federal Highway Administration (Bureau of Motor Carrier Safety), the Federal Railroad Administration and the Maritime Administration.

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Research indicates that the results of the use of alcohol in recreational boating can be: reduction in visual field (peripheral vision); some increased risk-taking; reduction in balancing capabilities; and decrements in information processing capabilities and performance on divided attention tasks. These effects can begin as soon as one starts drinking and can be significant at BAC levels as low as 0.035 percent.

Effects of Alcohol in Drownings

Alcohol can depress the swallowing and breathing reflexes, often turning a normal situation into a tragedy. An aquatic safety expert in a paper published in 1983 entitled "Alcohol and water - do they really mix?" discussed the effects of alcohol:

- o Caloric labyrinthitis is a fancy term relating to becoming disoriented, nauseous, or both, when water different from normal body temperature enters your ears. The effect of relatively warm water that is only 10 or so degrees less than body temperature in this and similar physical phenomena is greatly magnified by intoxication. Hence, a drunken person whose head is immersed may become so disoriented as to swim down to death instead of up to safety.
- o Torso reflex is an automatic gasp or inhalation response when the face and/or upper torso are suddenly placed in water cooler than body temperature. Torso reflex when added to inebriation-induced hyperventilation can easily result in aspiration of water and rapid drowning.
- o Thermal interactions, including peripheral hypothermia, or reduced muscular performance plus normal physical impairment caused by drinking, can rapidly reduce even a champion swimmer's in-water abilities.
- o Breath holding times underwater may differ widely in the same person due to the effect of cold water magnified by alcohol. The same neurological and physical mechanisms which interact to cause hyperventilation in drunks can also join to cut an intoxicated swimmers' air supply.
- o Coordination of psychomotor skill and control are immediately impaired by drinking. The in-water results of this impairment is especially telling on a tipsy, poor swimmer. Someone who has less than super swimming form when sober is especially troubled when drunk.

ANALYSIS

The use of alcohol by operators as it affects recreational boating safety has been a concern of the Safety Board, the Coast Guard, State Boating Law Administrators, and others since the early 1970's. Reports completed in 1973 and 1975 for the Coast Guard established that factual data were not available to assess the magnitude of the alcohol problem in boating. The Federal Boating Safety Act of 1971 clearly provides the Coast Guard and the States with the authority and the resources to combat this problem through Federal/State interaction in enforcement and educational programs. The Safety Board believes that the reduction of alcohol involved accidents, fatalities, and injuries in recreational boating activities should be a major national safety initiative.

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Recent efforts by a number of States to document the alcohol use problem have indicated that 35 to 38 percent (California and North Carolina) of the fatalities involved in recreational boating have blood alcohol concentrations (BAC) in excess of the "legally drunk" level defined for the States' motorists (a BAC of 0.10 percent). In one State (South Carolina), the number of recreational boating fatalities that were alcohol-related was reported in excess of 80 percent (30 of 37 deaths). Additionally, in at least one State (Maryland), accidents documented in 3 recent years indicated alcohol involvement in 75 percent of the cases.

National studies indicate that in between 65 and 69 percent of all drownings the victim has consumed alcohol in varying amounts. The drowning percentages are significant since the Coast Guard reports that nearly 90 percent of all recreational boating fatalities are the result of drowning. Research has shown that a person under the influence of alcohol is much more susceptible to drowning than a person who is not under the influence of alcohol.

Research completed for the Coast Guard has indicated that individuals with as little as 0.035 percent BAC may exhibit significant impairment in relatively normal recreational boating operations because peripheral vision, balance, and information processing is almost immediately affected by the consumption of alcohol in the recreational boating environment. A 150-pound person could reach a 0.035 percent BAC level by drinking as few as 1 1/2 12-ounce cans of beer or 1 1/2 ounces of 86 proof whiskey in a 1-hour period.

Impairment at a BAC of 0.035 percent is consistent with studies done by other researchers which indicate that the ability to stand upright begins to decrease significantly at 0.04 percent; the ability to distinguish close, but separated moving objects decreases at 0.03 percent; and the ability to divide attention between tasks decreases at a BAC as low as 0.02 percent. 18/

Based on the available information provided in studies and reports from the Center for Disease Control, the National Council on Alcoholism, the National Institute of Alcohol Abuse and Alcoholism, the Coast Guard, and the States, perhaps as many as 400 to 800 recreational boating fatalities annually may be alcohol involved. This is quite different from the 70 fatalities reported for 1982 by the Coast Guard. This would suggest that alcohol involvement is a major problem in recreational boating safety.

Statistics: The Need for Data

The present Coast Guard accident reporting data form used by individuals and/or States does not include a specific requirement to report alcohol involvement or operation of a recreational boat while "under the influence" of alcohol as defined by each State. The Coast Guard has been aware of the lack of data to assess the magnitude of alcohol use in boating safety accidents, fatalities, injuries, and property damage since 1973. The Safety Board believes that the Coast Guard in conjunction with the National Association of State Boating Law Administrators should review the federal accident report form which is used as, or serves as a model for, the State form and improve the form to clearly require reporting of alcohol involvement in recreational boating accidents. For the time being, the "Recreational Boating - Simplified Narrative" investigation report (appendix D) utilized by Coast Guard personnel in their investigations or in their review of fatal boating accident reports which includes a causal code for "excessive drinking" and other information could be utilized as a supplement to all the boating accident report forms

18/ U.S. Department of Transportation, Alcohol and Highway Safety: A Review of the State of Knowledge. Washington, D.C. 1978.

completed by boat operators and/or States. This would be an initial step to collect information on the alcohol problem until the Coast Guard, with the collaboration of the State Boating Law Administrators, can develop improvements to the boating accident report form which the States can use to report alcohol involvement in recreational boating accidents, fatalities, and injuries.

Educational Programs

The Safety Board believes that the educational organizations within the recreational boating community should address the hazards of alcohol use in boating operations. The Safety Board suggests that at a minimum safe boating educational courses should include descriptions of the stages of alcoholic influence and its symptoms, the marine environment, and how the effect of alcohol intensifies the hazards of boating operations, and specifically the resulting physical impairments such as loss of peripheral vision, balance, and information processing, as well as how alcohol affects the capability of a person who falls in the water to survive. Presently, no course covers this information although nearly all States have safe boating course manuals which could incorporate such information. Likewise, the Coast Guard Auxiliary, the U.S. Power Squadrons, the American National Red Cross and others should incorporate in their boating safety courses information on the effects of alcohol use and its role in recreational boating accidents, fatalities, and injuries. NASBLA should encourage its member States to include information on this hazard in their safe boating manuals. The Coast Guard could facilitate the educational efforts of the States and the various organizations by providing guidelines for a uniform national program. The Safety Board believes that the Coast Guard should develop or fund the development of educational materials on the effects of alcohol use to be disseminated by educational organizations in recreational boating safety and organizations that represent boat owners, safe boating organizations, and marine suppliers.

Enforcement

Enforcement efforts for recreational boating are now primarily the responsibility of the States. However, the survey completed by the State of California's Department of Boating and Waterways in 1981 revealed that in most States (39) and the District of Columbia, there was no defined blood alcohol concentration (BAC) for intoxication, yet it is unlawful to operate a vessel under the influence of alcohol in 49 of the 51 jurisdictions which responded to the survey. The Safety Board believes that, at a minimum, all States and the District of Columbia should establish a defined level of intoxication to strengthen and improve their marine programs to handle alcohol-related incidents and accidents. Ideally, based on research, that level should be set at a 0.035 percent BAC. However, as a beginning, it would seem realistic that the level in each State should be the same as that set for driving a motor vehicle while intoxicated. Some states have levels as low as a 0.08 BAC but most States have a level of 0.10 percent BAC. This BAC level has been generally accepted by the U.S. Congress, the States, and highway safety organizations, and is the level most generally accepted by the American public as "legally drunk."

Moreover, most States do not have chemical testing requirements to determine alcohol involvement in the event a recreational boat operator either is suspected of being intoxicated or is involved in an accident. Further, there are no Federal or uniform State requirements for toxicological tests in the event of a recreational boating fatality. Several States have statutory or regulatory requirements for toxicological tests in the event of an industrial and/or motor vehicle accident in which there is a fatality. Some States require such tests as a matter of policy established by their State medical

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examiner's office. The Coast Guard does not require toxicological tests for alcohol in the event of a recreational boating accident involving a fatality. The Safety Board believes that the NASBLA should include in its model State enforcement program the requirement for toxicological tests after every fatal accident to determine the role of alcohol in the accident. Without these tests, it is very difficult for State boating law officials to obtain conclusive information on the true impact of alcohol use in recreational boating accidents, fatalities, and injuries.

The Coast Guard should assist the States in efforts to improve their enforcement capabilities to address the alcohol use problem. The Safety Board believes the Coast Guard should, in keeping with the intent of the Federal Boat Safety Act of 1971, which states that the Secretary of Transportation "shall collect, analyze, and publish reports, information or statistics with such findings and recommendations as he [she] considers appropriate," develop in coordination with NASBLA a model State enforcement program to address alcohol use. Uniform State boating laws and regulations would improve the ability of the Coast Guard and the States to obtain improved nationwide information on the extent of the alcohol use problem and the efficacy and effectiveness of State programs to address the use of alcohol in recreational boating accidents, fatalities, and injuries.

CONCLUSIONS

1. Studies completed in 1973 and 1975 by researchers for the Coast Guard indicated that data were not available to assess the magnitude of the alcohol problem in recreational boating.
2. For 1982, the Coast Guard compiled data from reports received from States and/or individuals that indicated alcohol use contributed to 70 fatalities. However, data compiled by several States indicate the actual number of alcohol-involved fatalities annually may be as great as 400 to 800.
3. Statistics reported to the Coast Guard for 1982 are inadequate to determine the extent of alcohol involvement in recreational boating accidents, fatalities, injuries, and property damage. It appears that many alcohol-involved accidents and fatalities are not reported or are incorrectly reported.
4. In two States, information indicates that as many as 35 to 38 percent of the fatalities in recreational boating accidents are "legally drunk" at the generally accepted BAC of 0.10 percent. Additionally, one State indicates that as great as 80 percent of the fatalities in 1 year were alcohol-related and in one State 75 percent of accidents in 3 years were alcohol-related.
5. A study completed in 1975 for the Coast Guard indicated that when a recreational boat operator's blood alcohol concentration reaches 0.035 percent, the operator impairment in relatively normal boating operations is significant and that boat operators are almost immediately affected by alcohol consumption. A 150-pound person could reach this 0.035 percent BAC level by drinking as few as 1 1/2 12-ounce cans of beer or 1 1/2 ounces of 86 proof whiskey in a 1-hour period.
6. The Coast Guard has the statutory authority under the Federal Boat Safety Act of 1971, as amended, to develop and implement guidelines for a national alcohol program in recreational boating to reduce accidents, fatalities, injuries, and property damage.

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7. The Coast Guard, even though aware of the potential problem for a decade, is only now starting to focus attention on the issue of alcohol use and recreational boating accidents and fatalities.
8. The Coast Guard designed boat accident reporting form used by individuals and/or States to report accidents does not include reporting guidelines nor space for reporting of alcohol involvement; however, the Coast Guard simplified narrative investigation report form used in Coast Guard investigations or in reviews of operator and/or State submitted fatal boating accident reports includes a clearly stated causal code for "excessive drinking."
9. The States have not addressed the problem of alcohol use in recreational boating activities in their educational boating programs.
10. The major national recreational boating educational organizations such as the United States Coast Guard Auxillary, the American National Red Cross, the United States Power Squadrons and others have not addressed the hazards of alcohol use in recreational boating activities in their respective safe boating courses.
11. Although most States have laws which make it unlawful to operate a recreational boat while under the influence of alcohol, in most States there is no defined level of intoxication if the boat operator involved in an accident is suspected of being intoxicated.
12. Most States do not have laws that allow chemical testing of blood, breath, or urine without consent of the operator if the boating operator involved in an accident is suspected of being intoxicated.

RECOMMENDATIONS

Based on the findings of this safety study, the National Transportation Safety Board made the following recommendations:

—to the United States Coast Guard:

Develop and implement a national program to address the hazards of alcohol use in recreational boating safety including education and enforcement programs. (Class II, Priority Action) (M-83-69)

In coordination with the National Association of State Boating Law Administrators, revise the boating accident report form to include a specific accident causal entry for alcohol involvement in recreational boating accidents. (Class II, Priority Action) (M-83-70)

Assist national recreational boating safety educational organizations including, but not limited to, the United States Coast Guard Auxillary, the United States Power Squadrons, the American National Red Cross, the Boat Owners Association of the United States, the National Boating Federation, and the National Safe Boating Council, Inc., to develop and incorporate into their safe boating courses information regarding the hazards of alcohol use and its effects on recreational boat operators. (Class II, Priority Action) (M-83-71)

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--to the National Association of State Boating Law Administrators:

In coordination with the United States Coast Guard, develop uniform guidelines for a model education program that can be implemented by the States to address the hazards of alcohol use and its effects on recreational boat operators. (Class II, Priority Action) (M-83-72)

In coordination with the United States Coast Guard, develop a model enforcement program that can be uniformly implemented by the States to reduce accidents, fatalities, and injuries related to alcohol use in recreational boating operations. At a minimum, include in the model enforcement program a defined level of intoxication and toxicological and chemical testing requirements. (Class II, Priority Action) (M-83-73)

In coordination with the United States Coast Guard, develop a model State boating accident report form to include a specific accident causal entry for alcohol involvement in recreational boating accidents. (Class II, Priority Action) (M-83-74)

--to the United States Coast Guard Auxillary, the United States Power Squadrons, the American National Red Cross, the Boat Owners Association of the United States, the National Boating Federation, and the National Safe Boating Council, Inc.:

In cooperation with the United States Coast Guard, develop and incorporate into your safe boating courses materials on the hazards of alcohol use and its effects on recreational boat operators. (Class II, Priority Action) (M-83-75)

--to the Governors/Legislative Leaders of the States of Alabama, Alaska, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kentucky, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, Wisconsin, and the District of Columbia:

Adopt legislation to clearly define the level of legal intoxication for recreational boat operators in order to strengthen your State's enforcement program for reducing accidents, fatalities, injuries, and property damage caused by the use of alcohol. (Class II, Priority Action) (M-83-76)

--to the Governors/Legislative Leaders of the States of Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, Virginia, Washington, West Virginia, Wyoming, and the District of Columbia:

Adopt legislation to allow a chemical test of blood, breath, or urine if a recreational boating operator is suspected of being intoxicated and toxicological tests in the event of a recreational boating accident fatality. (Class II, Priority Action) (M-83-77)

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--to the Governors of the States of Arizona, Alaska, Colorado, Louisiana, Maine, Maryland, Nebraska, Tennessee, Utah, and Wisconsin:

Require procedures for toxicological tests in the event of a recreational boating fatality to document the role of alcohol in recreational boating accidents and fatalities. (Class II, Priority Action) (M-83-78)

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

/s/ JIM BURNETT
Chairman

/s/ FRANCIS H. McADAMS
Member

/s/ G. H. PATRICK BURSLEY
Member

/s/ DONALD D. ENGEN
Member

PATRICIA A. GOLDMAN, Vice Chairman, did not participate.

October 17, 1983

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APPENDIXES

APPENDIX A

ACCIDENT SCENARIOS IN RECREATIONAL BOATING

Many of the recreational boating fatalities reported in 1982 involved one person who disappeared from his/her boat. This type of accident generally involved falling overboard. However, a number of more serious accidents involved multiple fatalities and included collisions, capsizings, and swampings.

Recreational Boating Accidents by Type of Accident*

1982	Total Vessels Involved	Fatalities
Grounding	287	12
Capsizing	619	409
Swamping/Flooding	347	86
Sinking	82	49
Fire/Explosion (Fuel)	374	9
Fire/Explosion (Other)	64	0
Collision with another vessel	3,417	70
Collision with fixed object	666	91
Collision with floating object	210	18
Falls overboard	427	320
Falls within boat	61	0
Struck by boat or propeller	76	11
Other	405	54
Unknown	36	49
Total	7,071 ^{1/}	1,178

* Type of accident refers only to the first event that occurred. Some accidents involve more than one event, e.g., a grounding followed by a sinking is included here only as a grounding even though the sinking may have directly led to a drowning fatality.

^{1/} Total accidents = 5,377

Source: U.S. Coast Guard, Boating Statistics 1982.

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Information on the following accidents involving use of alcohol was provided by the States, or was obtained from discussions with regional Coast Guard personnel, or was obtained from accident reports submitted to the Coast Guard.

Collisions With Other Vessel

On July 27, 1983, two recreational boats, one 17 feet long and one 30 feet long, collided on the Severn River killing four persons. The 30-foot boat went through the hull and then over the small vessel. All four persons killed were on the small vessel. The weather was clear with a full moon. Reportedly, the smaller vessel was not using its running lights at the time of the collision. There was evidence that considerable amounts of alcohol had been consumed by the persons in the 17-foot boat. The operator of the 17-foot boat had a blood alcohol concentration of 0.21 percent.

A similar accident occurred on August 31, 1983, on the Potomac River when a 26-foot boat collided with the 95-foot dinner vessel DANDY, which has a 200-passenger capacity. The 26-foot boat struck the bow of the DANDY. The weather was clear. Reportedly, the small vessel was not using its running lights at the time of the collision and was operating at a high rate of speed. The operator of the smaller vessel was fatally injured and had a tested blood alcohol concentration of 0.23 percent.

Falls Overboard

On July 31, 1982, a 45-foot recreational houseboat departed with four persons aboard for a fishing outing on the Ohio River. The boat dropped anchor on August 1, 1982, where the persons on the boat had a large meal and started to fish and drink beer. One of the persons in the fishing party walked outside the safety railing on an extension of the main deck. This extension is used for fishline handling and not as a walkway. The person fell in the water and another person in the fishing party jumped into the water to save him. Both persons drowned. The blood alcohol concentration of one was 0.18 percent; the other was 0.39 percent.

Collision With Fixed Object

On August 15, 1982, a 20-foot recreational boat operating at a high rate of speed hit the corner of a pier. With the engine still running, the boat circled and hit the pier head-on a second time. The Coast Guard later found the boat drifting with both occupants in the bow—one was dead. The boat contained one bottle of rum (three fourths empty); two bottles of wine (one empty) and one case of beer (all cans full). The blood alcohol concentrations of the operator and the fatally injured occupant were both tested and found to be over 0.10 percent.

Grounding

On July 16, 1983, in Galveston Bay, a 24-foot inboard-outboard recreational boat ran aground at night with 13 people aboard. The weather was clear with a 10-mile visibility. No one was killed, but two persons were seriously injured. The U.S. Coast Guard air unit at Houston was on standby and a helicopter was dispatched to evacuate the injured. A 25-foot Coast Guard utility boat was used to tow in the recreational boat. The Coast Guard reported that the persons aboard were intoxicated. In addition to the use of alcohol, the operator was cited for negligent operation, for not having personal flotation devices (PFD) or a fire extinguisher aboard, and for not having a certificate of registration. The rescue involved 1 1/2 hours of flight time for the air unit (\$488 per hour) and 6 hours for the Coast Guard utility boat (\$125 per hour).

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APPENDIX B

BOATING ACCIDENT STATISTICS (1978-1982)

The recreational boating statistics maintained by the Coast Guard for the past 5 years (1978 through 1982) indicate the following accidents, fatalities, injuries, and property damage:

<u>Year</u>	<u>Accidents</u>	<u>Fatalities</u>	<u>Injuries</u>	<u>Alcohol Involved * Accidents</u>	<u>Fatalities from Alcohol Involved Accidents</u>	<u>Property Damage (in millions)</u>
1978	6,529	1,321	1,761	106	75	\$12.3
1979	5,368	1,400	2,463	118	78	\$16.7
1980	5,513	1,360	2,650	133	83	\$16.4
1981	5,128	1,208	2,438	140	91	\$13.6
1982	5,377	1,178	2,682	95	70	\$15.3
TOTAL	27,805	6,467	11,994	592	397	\$74.3

* Identified by Coast Guard as an accident in which alcohol was involved which led to a fatality(ies).

Source: U.S. Coast Guard Boating Statistics 1982 and Coast Guard Computer Printouts on Fatal Boating Accident -- Alcohol Related dated June 29 and September 8, 1983.

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APPENDIX C

BOATING ACCIDENT REPORT FORM CG-3865

DEPARTMENT OF TRANSPORTATION U.S. COAST GUARD CG-3865 (Rev. 5-81)		BOATING ACCIDENT REPORT		FORM APPROVED OMB No. 2115-0010	
<p>The operator of a vessel used for recreational purposes is required to file a report in writing whenever an accident results in, loss of life or disappearance from a vessel, an injury which requires medical treatment beyond first aid, or property damage in excess of \$200 or complete loss of vessel. Reports in death and injury cases must be submitted within 48 hours. Reports in other cases must be submitted within 10 days. Reports must be submitted to the reporting authority in the state where the accident occurred. This form is provided to assist the operator in filing the required written report.</p>					
COMPLETE ALL BLOCKS (Indicate those not applicable by "NA")					
NAME AND ADDRESS OF OPERATOR		AGE		OPERATOR'S EXPERIENCE	
OPERATOR TELEPHONE NO.		OWNER TELE. NO.		THIS TYPE OF BOAT <input type="checkbox"/> UNDER 25 HOURS <input type="checkbox"/> 25 TO 100 HOURS <input type="checkbox"/> 100 TO 500 HOURS <input type="checkbox"/> OVER 500 HOURS OTHER BOAT OPERATING EXP. <input type="checkbox"/> UNDER 25 HOURS <input type="checkbox"/> 25 TO 100 HOURS <input type="checkbox"/> 100 TO 500 HOURS <input type="checkbox"/> OVER 500 HOURS	
NAME AND ADDRESS OF OWNER		RENTED BOAT <input type="checkbox"/> YES <input type="checkbox"/> NO		NO. OF PERSONS ON BOARD <input type="checkbox"/> NONE <input type="checkbox"/> U.S. COAST GUARD <input type="checkbox"/> U.S. POWER SQUADRON <input type="checkbox"/> AMERICAN RED CROSS	
VESSEL NO. 1					
BOAT NUMBER	BOAT NAME	BOAT MAKE	BOAT MODEL	MFR HULL IDENTIFICATION NO.	
TYPE OF BOAT <input type="checkbox"/> OPEN MOTORBOAT <input type="checkbox"/> CABIN MOTORBOAT <input type="checkbox"/> AUXILIARY SAIL <input type="checkbox"/> SAIL (ONLY) <input type="checkbox"/> ROWBOAT <input type="checkbox"/> OTHER (Specify)	HULL MATERIAL <input type="checkbox"/> WOOD <input type="checkbox"/> ALUMINUM <input type="checkbox"/> STEEL <input type="checkbox"/> FIBERGLASS (Plastic) <input type="checkbox"/> OTHER (Specify)	ENGINE <input type="checkbox"/> OUTBOARD <input type="checkbox"/> INBOARD GASOLINE <input type="checkbox"/> INBOARD DIESEL <input type="checkbox"/> INBOARD OUTDRIVE <input type="checkbox"/> OTHER (Specify)	BOAT DATA (Propulsion) NO. OF ENGINES MAKE OF ENGINE HORSEPOWER (Total) YEAR BUILT (Engine) TYPE OF FUEL	BOAT DATA (Construction) LENGTH WIDTH (Beam) DEPTH (Inner Transom To Keel) YEAR BUILT (Boat)	
ACCIDENT DATA					
DATE OF ACCIDENT	TIME <u>AM</u> <u>PM</u>	NAME OF BODY OF WATER		LOCATION (Give location precisely)	
STATE	NEAREST CITY OR TOWN		COUNTY		
WEATHER	WATER CONDITIONS	TEMPERATURES (Estimate)	WIND	VISIBILITY	WEATHER ENCOUNTERED
<input type="checkbox"/> CLEAR <input type="checkbox"/> RAIN <input type="checkbox"/> CLOUDY <input type="checkbox"/> SNOW <input type="checkbox"/> FOG <input type="checkbox"/> HAZY	<input type="checkbox"/> CALM <input type="checkbox"/> CHOPPY <input type="checkbox"/> ROUGH <input type="checkbox"/> VERY ROUGH <input type="checkbox"/> STRONG CURRENT	AIR <u>°F</u> WATER <u>°F</u>	<input type="checkbox"/> NONE <input type="checkbox"/> LIGHT (0-1 MPH) <input type="checkbox"/> MODERATE (1-14 MPH) <input type="checkbox"/> STRONG (15-25 MPH) <input type="checkbox"/> STORM (Over 25 MPH)	<input type="checkbox"/> GOOD <input type="checkbox"/> FAIR <input type="checkbox"/> POOR	<input type="checkbox"/> WAS AS FORECAST <input type="checkbox"/> NOT AS FORECAST <input type="checkbox"/> NO FORECAST OBTAINED
OPERATION AT TIME OF ACCIDENT (Check all applicable)		TYPE OF ACCIDENT		WHAT, IN YOUR OPINION, CAUSED THE ACCIDENT	
<input type="checkbox"/> COMMERCIAL ACTIVITY <input type="checkbox"/> CRUISING <input type="checkbox"/> AT ANCHOR <input type="checkbox"/> APPROACHING DOCK <input type="checkbox"/> TIED TO DOCK <input type="checkbox"/> WATER SKIING <input type="checkbox"/> FUELING <input type="checkbox"/> RACING <input type="checkbox"/> FISHING <input type="checkbox"/> TOWING <input type="checkbox"/> HUNTING <input type="checkbox"/> BEING TOWED <input type="checkbox"/> SKIN DIVING OR SWIMMING <input type="checkbox"/> DRIFTING <input type="checkbox"/> OTHER (Specify)		<input type="checkbox"/> GROUNDING <input type="checkbox"/> COLLISION WITH FIXED OBJECT <input type="checkbox"/> CAPSIZING <input type="checkbox"/> COLLISION WITH FLOATING OBJECT <input type="checkbox"/> FLOODING <input type="checkbox"/> FALLS OVERBOARD <input type="checkbox"/> SINKING <input type="checkbox"/> FALLS IN BOAT <input type="checkbox"/> FIRE OR EXPLOSION (Fuel) <input type="checkbox"/> BURNS <input type="checkbox"/> FIRE OR EXPLOSION (Other than fuel) <input type="checkbox"/> HIT BY BOAT OR PROPELLER <input type="checkbox"/> COLLISION WITH VESSEL <input type="checkbox"/> OTHER (Specify)		<input type="checkbox"/> WEATHER CONDITIONS <input type="checkbox"/> FAULT OF HULL <input type="checkbox"/> EXCESSIVE SPEED <input type="checkbox"/> FAULT OF MACHINERY <input type="checkbox"/> NO PROPER LOOKOUT <input type="checkbox"/> FAULT OF EQUIPMENT <input type="checkbox"/> OVERLOADING <input type="checkbox"/> OTHER (Specify) <input type="checkbox"/> IMPROPER LOADING <input type="checkbox"/> HAZARDOUS WATERS <input type="checkbox"/> RESTRICTED VISION	
PERSONAL FLotation DEVICES					
WAS THE BOAT ADEQUATELY EQUIPPED WITH CG APPROVED LIFESAVING DEVICES?		WAS THE VESSEL CARRYING NON-APPROVED LIFESAVING DEVICES?		WERE THEY USED (If yes, list type(s) and number used.)	
<input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY ACCESSIBLE <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY USED <input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY ACCESSIBLE <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THEY USED <input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NOT APPLICABLE	
PROPERTY DAMAGE (\$...)		DESCRIBE PROPERTY DAMAGE			
THIS BOAT \$					
OTHER BOAT \$					
OTHER PROPERTY \$					
NAME AND ADDRESS OF OWNER (Damaged Property)					

Previous editions are obsolete

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DECEASED				
NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM <input type="checkbox"/> SWIMMER <input type="checkbox"/> NON-SWIMMER	DEATH CAUSED BY <input type="checkbox"/> DROWNING <input type="checkbox"/> DISAPPEARANCE <input type="checkbox"/> OTHER
NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM <input type="checkbox"/> SWIMMER <input type="checkbox"/> NON-SWIMMER	DEATH CAUSED BY <input type="checkbox"/> DROWNING <input type="checkbox"/> DISAPPEARANCE <input type="checkbox"/> OTHER
NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM <input type="checkbox"/> SWIMMER <input type="checkbox"/> NON-SWIMMER	DEATH CAUSED BY <input type="checkbox"/> DROWNING <input type="checkbox"/> DISAPPEARANCE <input type="checkbox"/> OTHER
INJURED				
NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	INCAPACITATED OVER 24 HOURS <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	INCAPACITATED OVER 24 HOURS <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	INCAPACITATED OVER 24 HOURS <input type="checkbox"/> YES <input type="checkbox"/> NO
ACCIDENT DESCRIPTION				
<small>DESCRIBE WHAT HAPPENED (Sequence of events. Include Failure of Equipment. If diagram is needed attach separately. Continue on additional sheets if necessary.)</small>				
VESSEL NO. 2				
NAME OF OPERATOR	ADDRESS	BOAT NUMBER		
TELEPHONE NUMBER		BOAT NAME		
NAME OF OWNER	ADDRESS			
WITNESSES				
NAME	ADDRESS	TELEPHONE NUMBER		
NAME	ADDRESS	TELEPHONE NUMBER		
NAME	ADDRESS	TELEPHONE NUMBER		
PERSON COMPLETING REPORT				
SIGNATURE	ADDRESS	DATE SUBMITTED		
<small>QUALIFICATION (Check one)</small> <input type="checkbox"/> OPERATOR <input type="checkbox"/> OWNER <input type="checkbox"/> INVESTIGATOR <input type="checkbox"/> OTHER		TELEPHONE		
<small>(do not use) - FOR REPORTING AUTHORITY REVIEW (use agency date stamp)</small>				
NAME OF REVIEWING OFFICE	DATE RECEIVED	<small>CAUSES BASED ON (Check one)</small> <input type="checkbox"/> THIS REPORT <input type="checkbox"/> INVESTIGATION AND THIS REPORT <input type="checkbox"/> INVESTIGATION <input type="checkbox"/> COULD NOT BE DETERMINED		
PRIMARY CAUSE OF ACCIDENT		REVIEWED BY		
SECONDARY CAUSE OF ACCIDENT				

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APPENDIX D

RECREATIONAL BOATING - SIMPLIFIED NARRATIVE
FORM CG 4885 and ADDENDUM



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

NCB 681-1007

16782
4 September 1976

From: Investigating Officer,
To: Commandant (QBD-2)
Via: (1) Officer in Charge, Marine Inspection Boatville, New Boat
(2) Commander, Coast Guard District (b)

Subj: Ridge Water, NB 0000 AR, flooding and sinking 500 yards from the
west bank of Lake No Accident, New Boat, on 4 July 1976, with deaths
of Blue Beard and Wild Bill.

1. Investigation of subject case is completed, no further investigation warranted due to:

a. ☒ Investigation conducted by: Sheriff Department of King David County.

b. ☒ Investigation limited due to:

☐ NO WITNESS

☒ NO SURVIVORS

☒ NO VESSEL (shooting/sunk/removed)

c. ☐ There is no actionable evidence of violation of Federal Statute, Regulations, or evidence of actionable misconduct, incompetence or negligence.

2. The required Boating Accident Report has been properly prepared and submitted.

3. The causes of the accident are concluded as:

a. PRIMARY <u>13</u>	b. SECONDARY <u>4</u>	c. ADDITIONAL <u>2</u>
(1) Excessive speed	(6) Fault of hull	(11) Hazardous waters
(2) Improper loading	(7) Fault of machinery	(12) Excessive drinking
(3) Improper lookout	(8) Fault of equipment	(13) Other: <u>OVERLOADING</u>
(4) Fault of operator	(9) Natural causes	(14) Unknown
(5) Fault of other persons	(10) Weather	

4. It is recommended that the case be closed.

Enc: (1) Death certificates for Blue Beard and Wild Bill
(2) King David County Sheriff's Investigation
(3) Photographs of boat wreckage and accident scene (15)

DCMI ENDORSEMENT

1. Forwarded approved.

2.

DISTRICT ENDORSEMENT

1. Forwarded approved.

2.

CG-4885 (11-75)

RECREATIONAL BOATING - SIMPLIFIED NARRATIVE

000030

DEPARTMENT OF TRANSPORTATION U. S. COAST GUARD CG-4685A (4-75)		ADDENDUM TO RECREATIONAL BOATING - SIMPLIFIED NARRATIVE (To accompany a completely filled-out Boating Accident Report)		REPORTS CONTROL SYMBOL RCS-G-BD-9007
U. S. COAST GUARD CAPACITY INFORMATION			BOAT DATA	
MAXIMUM HORSEPOWER (hp.)	MAXIMUM PERSONS CAPACITY (16+)	MAXIMUM WEIGHT CAPACITY (16+)	WEIGHT (with engine) (lbs.)	FREEBOARD (in.) (amidships)
10	475	600	200	4
			AUXILIARY COURTESY MOTORBOAT EXAMINATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> UNKNOWN	
EQUIPMENT DATA				
TOTAL WEIGHT OF CARRY-ON EQUIPMENT ON BOARD (16+)		LOCATION AND WEIGHT OF GEAR (11 most in excess of 10% of total boat and passenger weight)		TYPE AND NO. OF FIRE EXTINGUISHERS
50		N/A		None on Board
MANUFACTURE OF IFD'S N/A			TYPE AND NUMBER OF IFD'S None on Board	
RADIO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO TYPE			BAILING EQUIPMENT PUMP <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
ENVIRONMENT DATA				
REACH (Wind direction over water)		TIME OF ACCIDENT (Check one)		
5 miles		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> DUSK <input type="checkbox"/> NIGHT		
WAS OPERATOR AWARE OF FORECASTED WEATHER? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO SOURCE: Radio		DISTANCE FROM NEAREST VESSEL OR OTHER SOURCE OF HELP 500 yds. N/A		
FORECASTED WEATHER: Moderate Wind/Clear				
OPERATION OF VESSEL PRIOR TO ACCIDENT				
DISTANCE OF VESSEL FROM NEAREST SHORE 500 yds. N/A		LOCATION AND ACTIVITIES OF PERSONS LEADING UP TO ACCIDENT Wild Bill was seated in the forward portion of the boat. Blue Beard was in the rear operating the motor. They were traveling approximately 20 m.p.h. Blue Beard suddenly cut the power, a wave washed over the transom, and the boat flooded and sank.		
ACTIONS OF VESSEL LEADING UP TO ACCIDENT Cruising at 20 m.p.h. Sudden stop. Wave over transom. Flooded.		IS THERE ANY EVIDENCE THAT THE OPERATOR WAS UNDER THE INFLUENCE OF ALCOHOL AND/OR DRUGS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
Detailed Description of Accident (Continue on additional sheets if necessary) Wild Bill and Blue Beard were cruising along headed for Flag Island. For no known reason Blue Beard cut the power very suddenly. A wave washed over the transom reducing the freeboard of the transom to zero. Water continued to rush in flooding the boat and sinking it. Wild Bill went down with the boat. Blue Beard held on to a 5 gallon can and began swimming for shore. He drowned about 100 yds. from the bank.				
For the following accident types, fill in for only the type or types of accidents which occurred. If two accident types occurred, fill in both types. i.e. collision leading to sinking.				
COLLISION GROUNDING N/A				
DESCRIPTION OF OTHER VESSEL OR OF OBJECT STRUCK		LENGTH OF TIME OPERATOR HAD BEEN ON WATER <input type="checkbox"/> VESSEL #1 (hrs.) - VESSEL #2 (hrs.)		
DESCRIBE ANY VISIBILITY PROBLEMS FROM OPERATOR'S POSITION				
WAS VESSEL/OBJECT SEEN BY OPERATOR PRIOR TO COLLISION? (Check all applicable) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
<input type="checkbox"/> NOT INTERPRETED AS HAZARD WHEN FIRST SEEN <input type="checkbox"/> VIOLATION OF RULES OF ROAD BY EITHER OPERATOR				
<input type="checkbox"/> UNABLE TO AVOID EVEN THOUGH REACTED WHEN FIRST SEEN <input type="checkbox"/> OTHER (Specify)				
Describe any damage to all vessels involved (Continue on additional sheets if necessary.)				

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IF PERSONS WERE BURNED, DID IT OCCUR (Check all that apply)		
<input type="checkbox"/> DURING EXPLOSION	<input type="checkbox"/> AFTER EXPLOSION	<input type="checkbox"/> DURING STEADY FIRE (without explosion)
WAS FIRE EXTINGUISHER USED TO TRY TO EXTINGUISH FIRE? <input type="checkbox"/> YES <input type="checkbox"/> NO		
WAS FIRE SUCCESSFULLY EXTINGUISHED? <input type="checkbox"/> YES <input type="checkbox"/> NO		
CAPSIZING SWAMPING SINKING FALLS OVERBOARD		
WAS VESSEL EQUIPPED WITH A FOREDECK? <input type="checkbox"/> YES <input type="checkbox"/> NO VESSEL COVERED <input type="checkbox"/> YES <input type="checkbox"/> NO		
WAS VESSEL EQUIPPED WITH A MOTORVELL? <input checked="" type="checkbox"/> YES <u>2</u> in Dues <u>14</u> in Long <input type="checkbox"/> NO		
DID PERSONS ATTEMPT TO PUMP OR TO BAIL OUT BOAT?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	DESCRIBE AVAILABILITY AND LOCATION OF HAND RAILS OR HAND HOLES NONE
WAS ENGINE IN GEAR WHEN BOAT WAS LOCATED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	IF PERSONS LEAN AWAY FROM FLOATING BOAT, GIVE IN REASONS FOR DOING SO
WAS GAS TANK EMPTY?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	The boat sank.
EVIDENCE OF MALFUNCTIONING ENGINE?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
DESCRIPTION OF POST ACCIDENT EVENTS		
Describe any injuries or deaths. (Continue on additional sheets if necessary) Blue Beard and Wild Bill drowned. Neither of them could swim. Wild Bill went down with the boat almost immediately. Blue Beard used a 5 gallon can to stay afloat. He was trying to swim to shore but apparently lost his grip on the can, panicked and drowned.		
WAS RADIO USED?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	WHAT WERE THE FINAL POSITIONS OF ANY DROWNED PFD BEARERS? (Indicate number of persons for each position)
WERE DISTRESS SIGNALS USED?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	FACE DOWN <u>N/A</u> ON BACK <u>N/A</u>
HOW MANY PERSONS (Indicate number for each)		DESCRIBE THE FINAL POSITION OF VESSEL
JUMPED <u>0</u> WERE THROWN OVERBOARD <u>2</u> WORE PFD'S <u>0</u>		At the bottom of Lake No Accident
ELAPSED TIMES UNTIL MAJOR OCCURRENCES (Such as a person's drowning, vessel's sinking, person's striking the shore, etc.) Vessel underway - 0945 Wild Bill drowned - 1002 Vessel flooded - 1000 Blue Beard drowned - 1020 Vessel sank - 1001		
Details of Rescue (Continue on additional sheets if necessary) Suzy Creamcheese, a witness, raced to the nearest phone booth and called the Sheriff's Office (1005). Police arrive on scene by car (1010). Police boat underway (1025). Police boat on scene (1045).		
What is the operator's opinion as to the root cause of the accident and how the accident could have been prevented? (Continue on additional sheets if necessary) Operator and passenger drowned. Witness Suzy Creamcheese stated that the boat had too large a motor.		
Additional Comments (Continue on additional sheets if necessary)		